

CHAPTER 13

APPENDIX 13C.

SUMTER COUNTY REGISTER OF MAINTAINED ROADS

Federal, State and Principal County Roads					
Road No.	Section	Functional Classification	Road No.	Section	Functional Classification
<i>Federal Roads</i>			<i>County Roads</i>		
I-75	All	Major Arterial	C-44A	WW city limits to SR 44	Minor Collector
US 301	All	Major Arterial	C-48	US 301 to Lake Co. line	Major Collector
US 27/441	All	Major Arterial	C-48	Citrus Co. line to I-75	Major Collector
			C-462	C-475 to US 301	Minor Collector
<i>State Roads</i>			C-462	US 301 to CR C-466A	Minor Collector
Turnpike	All	Major Arterial	C-466	I-75 to Lake Co. line	Major Collector
SR 44	All	Minor Arterial	C-466A	US 301 to Lake Co. line	Major Collector
SR 48	I-75 to CR C475	Minor Arterial	C-468	US 301 to SR 44	Major Collector
SR 50	All	Minor Arterial	469	CR C-48 to SR 50	Minor Collector
SR 471	All	Minor Arterial	C-470	SR 44 to Lake Co. line	Major Collector
			C 472	US 301 to CR 113	Minor Collector
			C-475	CR C-470 to SR 48	Major Collector
			C-475	SR 44 to Marion Cty.	Minor Collector
			C-476	Citrus Co. line to US 301	Major Collector
			C-476	US 301 to SR 471	Major Collector
			C-476A	C-476 to C48	Minor Collector
			C-478	US 301 to SR 471	Minor Collector
			C-478	SR 471 to CR C-48	Minor Collector
			C-478A	SR 471 to SR 50	Minor Collector
			C-478B	CR C-476 to I-75	Minor Collector
			C-575	CR C-48 to CR C-476	Minor Collector

COUNTY LOCAL ROADS (100 series)								
Road No.	Section	Class	Road No.	Section	Class	Road No.	Section	Class
100	all	major	118	all	minor	163	all	minor
100B	all	minor	119	all	minor	165	all	minor
101	all	major	120	all	minor	167	all	minor
102	all	minor	121	all	major	169	all	minor
103	all	major	122	all	minor	171	all	minor
103G	all	minor	123	all	minor	173	all	minor
103G-1	all	minor	124	all	minor	177	all	minor
103G-2	all	minor	124A	all	minor	179	all	minor
104	all	major	126	all	minor	181	all	minor
104B	all	minor	127	all	minor			
105	all	minor	128	all	minor			
106	all	minor	129	all	minor			
107	all	minor	130	all	minor			
108	all	minor	131	all	minor			
109	all	major	132	all	minor			
109A	all	minor	132A	all	minor			
109A-1	all	minor	133	all	minor			
109B	all	major	134	all	minor			
109B-1	all	minor	135	all	minor			
109B-2	all	minor	136	all	minor			
109C	all	minor	137	all	minor			
109D	all	major	138	all	minor			
109D-1	all	minor	139	all	major			
109D-2	all	minor	140	all	minor			
109D-3	all	minor	141	all	minor			
109E	all	major	142	all	minor			
109E-1	all	minor	143	all	major			
109E-2	all	minor	144	all	minor			
109F	all	minor	145	all	minor			
109F-1	all	minor	146	all	minor			
109G	all	minor	147	all	minor			
109G-1	all	minor	148	all	minor			
109H	all	minor	149	all	minor			
110	all	minor	150	all	minor			
112	all	minor	151	all	minor			
113	all	major	152	all	minor			
114	all	major	153	all	minor			
114A	all	major	154	all	major			
114B	all	minor	154A	all	minor			
114C	all	minor	154B	all	minor			
115	all	minor	155	all	minor			
115A	all	minor	156	all	major			
116	all	minor	157	all	minor			
117	all	major	159	all	minor			
117A	all	minor	161	all	minor			

COUNTY LOCAL ROADS (200 series)								
Road No.	Section	Class	Road No.	Section	Class	Road No.	Section	Class
200	all	minor	233	all	minor			
201	all	minor	233A	all	minor			
202	cr201-cr227	major	235	all	minor			
202	cr227-end	minor	235A	all	minor			
203	all	minor	237	all	minor			
204	all	major	238	all	minor			
205	C462-cr230	major	239	all	minor			
205	cr230-end	minor	240	all	minor			
205A	all	minor	241	all	minor			
205B	all	major	242	all	minor			
205C	all	minor	243	all	minor			
207	all	minor	243A	all	minor			
209	all	major	243B	all	minor			
210	all	minor	243C	all	minor			
213	all	major						
214	all	minor	243C-1	all	minor			
215	all	minor	243D	all	minor			
216	all	minor	243E	all	minor			
216A	all	minor	243E-1	all	minor			
217	all	minor	243F	all	minor			
218	all	minor	243G	all	minor			
219	all	major	243H	all	minor			
221	all	major	243I	all	minor			
222	all	major	244	all	minor			
222A	all	minor	245	all	minor			
223	all	major	245A	all	minor			
225	all	minor	245D	all	minor			
226	all	minor	246	all	minor			
227	all	major	247	all	minor			
227A	all	minor	248	all	minor			
228	all	minor	248A	all	minor			
229	SR44- C466	major	248B	all	minor			
229	C466- end	minor	248C	all	minor			
230	all	major	249	all	minor			
230A	all	minor	251	all	minor			
230B	all	minor						
230C	all	minor						
231	all	major						
232	WW- cr221	major						
232	cr221- end	minor						
232A	all	minor						

COUNTY LOCAL ROADS (300 series)								
Road No.	Section	Class	Road No.	Section	Class	Road No.	Section	Class
300	all	major						
300A	all	minor						
302	all	minor						
303	all	minor						
304	all	minor						
305	all	minor						
306	all	minor						
306A	all	minor						
306B	all	minor						
307	all	minor						
309	all	minor						
309A	all	minor						
309B	all	minor						
311	all	minor						
312	all	minor						
313	all	minor						
314	all	minor						
315	all	minor						
316A	all	minor						
317	all	major						
317A	all	minor						
317B	all	minor						
318	all	minor						
319	all	minor						
320	all	minor						
321	all	minor						
326	all	minor						
328	all	minor						
328A	all	minor						
330	all	minor						

COUNTY LOCAL ROADS (400 series)								
Road No.	Section	Class	Road No.	Section	Class	Road No.	Section	Class
400	all	major	426G	all	minor	449	all	minor
401	all	major	428	all	minor	450	all	minor
401A	all	minor	429	all	major	451	all	minor
401B	all	minor	429A	all	minor	452	all	major
401C	all	minor	429B	all	minor	452A	all	minor
402	all	minor	429C	all	minor	453	all	minor
402A	all	minor	429D	all	minor	454	all	minor
405	all	major	430	all	minor	455	all	minor
405A	all	minor	430A	all	minor	455B	all	minor
405B	all	minor	431	all	minor	457	all	minor

COUNTY LOCAL ROADS (400 series)								
Road No.	Section	Class	Road No.	Section	Class	Road No.	Section	Class
405C	all	minor	431A	all	minor	457A	all	minor
405D	all	minor	431B	all	minor	457B	all	minor
405N	all	minor	432	all	minor	459	all	minor
406	all	major	432A	all	minor	461	all	minor
406A	all	minor	433	all	minor	462	all	minor
412	all	major	434	all	minor	463	all	minor
412A	all	minor	434A	all	minor	463A	all	minor
412B	all	minor	434B	all	minor	464	all	minor
412C	all	minor	435	all	minor	465	all	minor
413	all	minor	436	all	minor	467	all	minor
414	all	minor	436A	all	minor	467A	all	minor
415	all	minor	437	all	major	469	all	minor
415A	all	minor	437A	all	major	474	all	minor
415B	all	minor	437B	all	minor	477	all	major
415C	all	minor	438	all	minor	477A	all	minor
416	all	major	439	all	major	479	all	major
417	all	minor	439A	all	minor	481	all	minor
418	all	minor	439B	all	minor	481A	all	minor
419	all	minor	439C	all	minor	481B	all	minor
420	all	minor	439D	all	minor	482	all	major
421	all	minor	440	all	major	482A	all	minor
422	all	major	440A	all	minor	482B	all	minor
422A	all	minor	441	all	minor	482C	all	minor
422B	all	minor	442	all	minor	482C-1	all	minor
423	C470- cr428	major	443	all	minor	482D	all	minor
423	cr428- end	minor	444	cr443- cr453	major	483	all	minor
424	all	major	444	cr453- end	minor	483A	all	minor
426	all	major	445	all	minor	484	all	minor
426A	all	minor	446	all	major	484A	all	minor
426B	all	minor	446A	all	minor	485	all	minor
426C	all	minor	447	all	minor	485A	all	minor
426D	all	minor	448	all	minor	486	all	minor
426E	all	minor	448A	all	minor	487	all	minor
426F	all	minor	448B	all	minor	487A	all	minor
488	all	minor						
489	all	minor						
489A	all	minor						
489B	all	minor						
490	all	minor						
491	all	minor						
494	all	minor						
494A	all	minor						
495	all	minor						
496	all	minor						

COUNTY LOCAL ROADS (500 series)								
Road No.	Section	Class	Road No.	Section	Class	Road No.	Section	Class
500	all	minor	535	all	minor			
501	all	major	536	all	minor			
502	all	minor	538	all	minor			

COUNTY LOCAL ROADS (500 series)								
Road No.	Section	Class	Road No.	Section	Class	Road No.	Section	Class
503	all	minor	539	all	minor			
503C	all	minor	539A	all	minor			
503D	all	minor	540	all	minor			
503E	all	minor	541	all	minor			
504	all	minor	542	all	minor			
505	all	minor	543	all	minor			
507	all	major	543A	all	minor			
508	all	minor	543B	all	minor			
509	all	minor	544	all	minor			
510	all	minor	545	all	minor			
510A	all	minor	545A	all	minor			
511	all	minor	546	all	minor			
511A	all	minor	548	all	minor			
513	C468- cr508	major	549	all	minor			
513	cr508- end	minor	551	all	minor			
514	all	minor	551A	all	minor			
515	all	minor	552	all	minor			
518	all	minor	553	all	minor			
519	all	minor	555	all	minor			
519A	all	minor	557	all	minor			
520	all	minor	558	all	major			
521	all	minor	559	all	minor			
522	all	major	561	all	minor			
523	all	minor	563	all	minor			
524	all	minor	567	all	minor			
525	all	minor	569	all	minor			
526	US301- SR471	major	571	all	major			
526	SR471- end	minor	573	all	minor			
526A	all	minor	577	all	minor			
527	all	minor						
527A	all	minor						
527B	all	minor						
528	all	minor						
529	all	minor						
531	all	minor						
532	all	minor						
532C	all	minor						
533	all	minor						
533A	all	minor						
534	all	minor						

COUNTY LOCAL ROADS (600 series)								
Road No.	Section	Class	Road No.	Section	Class	Road No.	Section	Class
601A	all	minor	629	all	minor	674	all	major
601B	all	minor	629A	all	minor	674A	all	minor
602	all	minor	630	all	minor	675	all	major
603	all	major	631	all	major	676	all	minor
604	all	minor	631A	all	minor	677	all	minor
605	all	minor	631B	all	minor	669	all	minor
606	all	minor	632	all	minor	671	all	minor
607	all	minor	633	all	minor	673	all	major
607B	all	major	634	all	minor	678	all	minor
607C	all	minor	635	all	major	679	all	minor
607D	all	minor	636	all	minor	680	all	minor
607E	all	minor	638	all	minor	681	all	major
608	all	minor	639	all	minor	682	all	minor
609	all	minor	640	all	minor	683	all	major
609A	all	major	641	all	minor	683B	all	minor
609B	all	minor	642	all	major	683D	all	major
609C	all	minor	643	all	minor	683D-1	all	minor
610	all	minor	643A	all	minor	683D-1A	all	minor
613	all	minor	645	all	minor	683E	all	minor
614	C476- cr614A	major	646	all	minor	684	all	major
614	cr614A- end	minor	646A	all	minor	685	all	minor
614A	cr614- cr615C	major	647	all	major	686	all	minor
614A	cr615C- end	minor	647A	all	minor	687	all	minor
615	all	minor	647B	all	minor	688	all	minor
615B	all	minor	647C	all	minor	690	all	major
615C	all	minor	647D	all	minor	691	all	minor
616	all	major	648	all	minor	692	all	minor
617	all	minor	649	all	minor	693	all	minor
618	all	minor	650	all	minor			
619	all	minor	651	all	minor			
620	all	minor	652	all	minor			
621	all	minor	652A	all	major			
622	all	major	653	all	minor			
622A	all	minor	654	all	minor			
622B	all	minor	654A	all	minor			
622C	all	minor	655	all	minor			
623	all	minor	656	all	major			
624	all	minor	656G	all	minor			
624A	all	minor	656H	all	minor			
625	all	major	657	all	minor			
626	all	minor	659	all	minor			
627	all	minor	663	all	minor			
628	all	minor	665	all	minor			

COUNTY LOCAL ROADS (700 series)								
Road No.	Section	Class	Road No.	Section	Class	Road No.	Section	Class
700	all	minor	747	C478-end	minor			
702	all	minor	748	all	minor			

COUNTY LOCAL ROADS (700 series)								
Road No.	Section	Class	Road No.	Section	Class	Road No.	Section	Class
704	all	minor	749	all	minor			
705	all	minor	751	all	minor			
706	all	minor	752	all	minor			
707	all	minor	753	all	minor			
708	all	minor	754	all	minor			
708A	all	minor	755	all	minor			
710	all	minor	756	all	minor			
711	all	minor	756A	all	minor			
713	all	minor	756B	all	minor			
714	all	minor	757	all	minor			
714A	all	minor	758	all	minor			
716	all	minor	759	all	minor			
718	all	minor	760	all	minor			
719	all	minor	762	all	minor			
720	all	minor	763	all	minor			
720A	all	minor	765	all	minor			
721	all	major	767	all	minor			
722	all	minor	771	all	minor			
723	cr721- WEB	major	772	all	minor			
723	WEB- end	minor	772A	all	minor			
724	all	minor	772B	all	minor			
726	all	minor						
727	all	major	772C	all	minor			
728	all	minor	773	all	minor			
729	all	minor	774	all	minor			
730	all	minor	774A	all	minor			
731	all	minor	776	all	minor			
733	all	minor	778	all	minor			
734	all	minor	782	all	minor			
735	all	minor	782A	all	minor			
736	all	minor	783	all	minor			
737	all	minor	784	all	minor			
738	all	minor	788	all	minor			
738A	all	minor						
738B	all	minor						
739	all	minor						
740	all	major						
742	all	minor						
743	all	minor						
745	all	minor						
746	all	minor						
746A	all	minor						
747	C478-C48	major						

APPENDIX 13D.

ROADWAY AND SITE DEVELOPMENT-- CONSTRUCTION, OPERATION AND MAINTENANCE STANDARDS

In order that the various purposes of this chapter be accomplished, all development shall conform with applicable codes, plans and specifications approved by the authority, standards specified elsewhere in this chapter, and the following general construction, operating and maintenance standards:

Sec. D.1. General.

D.1.1. Responsibility for construction. All required physical improvements shall be provided by the developer at no expense to the commission, unless otherwise agreed to by the commission. The developer, and his engineer or architect where applicable, shall be responsible to the commission for the satisfactory construction of all permitted improvements. Except for minor development, all infrastructure improvements (including water and sewer systems) shall be installed under the direction, supervision and coordination of the developer's engineer. He shall have available, when necessary, a qualified survey party for the purpose of setting lines and grades for improvements and an approved testing program using qualified persons. It shall be the responsibility of the developer's engineer to ensure that sufficient surveys, inspections and tests are performed during construction so that the required certification(s) can be provided upon completion of the improvements.

D.1.2. Notification of construction. The developer shall notify the department, in writing, of the intended date for beginning of medium and major development construction, at least five (5) days before actual construction begins.

D.1.3. Quality control.

D.1.3.1. Inspections. The approving authority may inspect all construction of permitted improvements. He is authorized to call to the attention of the contractor any failure of work or materials to conform with the plans and specifications. To secure corrective action, he may bring the failure to the attention of the developer and his engineer/architect. The approving authority may reject materials and work when not in conformity with the approved codes, plans and specifications.

D.1.3.2. Testing. Laboratory or field tests and measurements, for width, depth, stability, density and other performance criteria, are required for all construction, as is normal for the industry. When required, these shall be made by a duly licensed engineering testing laboratory, at the developer's expense. All test results or measurements not in conformance with the plans and specifications shall be reported to the director of public works and the director of planning and development. Minimum requirements for tests are as specified herein.

D.1.3.3. Certification. Upon completion of medium and major development, the developer's engineer shall submit the following to the director:

- (a) As-built drawings.
- (b) A certificate of completion which shall include a statement that the methods of construction, materials used, and the results of tests and measurements of the project substantially meet the requirements of all applicable codes and the approved plans and specifications.

D.1.3.4. Final inspection. Upon receipt of as-built drawings and certification, the approving authority shall perform a final inspection of the permitted improvements for compliance with all applicable codes and the approved plans and specifications. When the approving authority is satisfied as to the acceptability of the improvements, he shall so notify the commission.

(Ord. No. 96-23, § 9, 12-16-96; Ord. No. 2003-1, 1-14-03)

Sec. D.2. Road and bridge standards.

D.2.1. Construction.

D.2.1.1 Introduction. All materials and construction procedures and methods shall, as a minimum, be in accordance with the current edition of Florida Department of Transportation's "Standard Specifications For Road and Bridge Construction", except where herein otherwise provided or authorized by the commission. Types of road construction not specified, but which are equivalent thereto may be allowed by the commission upon recommendation by the county engineer and director of public works.

D.2.1.2. Clearing and grubbing:

- (a) All rights-of-way must be completely cleared and grubbed for their entire width, as directed by the county engineer, according to current Florida Department of Transportation specifications, unless otherwise agreed upon by the commission. Trash, brush, trees, etc. may be burned within the right-of-way limits provided no local, county, state or federal law is violated.
- (b) Removal and disposal of waste material
 - (1) Gumbo and clay--Gumbo and other plastic clays meeting the definition of unsuitable material as defined in Index Nos. 500 and 505 published in the FDOT Roadway and Traffic Design Standards (January 2000) shall be removed within the area two feet below the subgrade, or more if soil conditions require it, and such excavation shall extend horizontally to the ditch line or one (1) foot behind the back of the curb. Where materials are removed below the curb, see Index No. 500 for underdrain requirements. These materials shall be disposed of by the contractor at his expense.
 - (2) Muck and peat--Muck and peat and other organic materials meeting the definition of unsuitable material as defined in Index Nos. 500 and 505 published in the FDOT Roadway and Traffic Design Standards (January 2000) shall be completely

removed between the outside shoulder lines and be disposed of as directed by the county engineer.

D.2.1.3. Grading. The grade, in a fill section, shall be constructed in six-inch lifts to conform to the desired cross-section. All portions of the roadbed in fill section below the top twelve (12) inches of the subgrade shall be compacted to a density of at least ninety-eight (98) percent of the maximum density as determined by AASHTO Method T99.

D.2.1.4. Drainage.

- (a) *Drainage pipe.* Where methods of drainage using pipe are required, the following standards apply:
 - (1) Road cross-drain pipe.
 - a. Acceptable types--Reinforced concrete, galvanized corrugated metal, corrugated aluminum, HDPE or other FDOT approved materials.
 - b. Minimum size--Eighteen (18) inches diameter or equal.
 - c. Endwall, inlet manhole or mitered end section with concrete collar required at each end.
 - (2) Roadside drain pipe:
 - a. Acceptable types--Reinforced concrete, galvanized corrugated metal, corrugated aluminum, HDPE or other FDOT approved materials.
 - b. Minimum size--Fifteen (15) inches diameter or equal.
 - (3) Storm sewer pipe:
 - a. Acceptable types--Reinforced concrete, galvanized corrugated metal or corrugated aluminum, HDPE or other FDOT approved materials.
 - b. Minimum size--Eighteen (18) inches or equal.
 - c. Inlet or manhole required at each change of alignment or grade.
- (b) *Headwalls.* Shall be constructed of concrete or sand-cement rip rap (5:1 mix approved bags)
- (c) *Inlets.* Meet DOT specs.
- (d) *Manholes.* Meet DOT specs.

(e) *Erosion control.*

- (1) *Grassing and mulching* of unpaved areas within the right-of-way may be deferred until the time of home construction, but no longer than six (6) months. If grassing and mulching is delayed longer than 1 month, erosion control measures shall be taken at all drainage structures to prevent erosion into the structures, and the piping and structures shall be cleared of soil buildup at the time of grassing.
- (2) *Sodding.* Required on all drainage ditches where the grade exceeds three (3) percent.

D.2.1.5. Subgrade.

- (a) *Material.* The subgrade shall be constructed of material having a minimum bearing value of forty (40) L.B.R. (Limerock Bearing Ratio)
- (b) *Construction.* The subgrade shall be constructed in six-inch lifts to conform to the desired cross-section. It shall be compacted to a density of not less than ninety-eight (98) percent of the maximum density as determined by AASHTO Method T 180. The subgrade shall be shaped prior to making the density tests.
- (c) *Width.* The subgrade shall be two (2) feet wider than the base course (one (1) foot each side) and in the case of curb and gutter shall extend six (6) inches beyond the back of curb.
- (d) *Depth.* The subgrade shall have a minimum depth of twelve (12) inches across its entire width.
- (e) *Alternate construction.* In lieu of the twelve-inch stabilized subgrade, the developer will have the option to install ten (10) inches of lime rock base. Upon approval of the county engineer, based upon suitable tests from a certified engineering testing laboratory, six (6) inches of lime rock base may be sufficient.
- (f) *Care of subgrade.* Trucks will be allowed on finished subgrade to dump the base course, but the contractor will be required to level out ruts before placing base course on them. In the event the trucks cause too much damage to the subgrade, the county engineer or Inspector may require dumping, spreading and hauling on the base course.
- (g) *Installation of utilities.* In the process of construction of the subgrade, prior to compaction, and before any base material is applied, all underground work for water mains, sanitary sewers, storm sewers, electric power conduits and any other utility including all service connections shall be installed completely and approved through the width of the road to a point at least two (2) feet outside of the back of curb or edge of shoulder. All underground improvements so installed for the purpose of future service connection shall be properly capped and back-filled.

- (h) *Testing.* At least one test location in each block of a street, or at not more than five hundred (500) feet intervals, whichever results in the most tests, for width, depth, density and bearing, is required.

D.2.1.6. Roadway base.

- (a) *Material.* Ocala Limerock having a minimum bearing value of one hundred (100) LBR, Soil Cement, or Durarock shall be compacted to a density of not less than ninety-eight (98) percent of the density as determined by AASHO Method T 180. Soil Cement shall be compacted to 98% of the standard Proctor (AASHO T-134) and having a minimum laboratory compressive strength of 300 psi in seven (7) days.
- (b) *Width.* All base shall be one (1) foot wider (six (6) inch each side) than the finished surface. No form boards will be required unless, in the opinion of the inspector or engineer, the contractor is not taking precautions to obtain the full depth at the edge.
- (c) *Depth.* Six (6) inches minimum.
- (d) *Prime coat.* Prime coat shall be applied to all base courses and sand sealed.
- (e) *Stabilized surface for private easements.* Where stabilization of private easements is required, the material shall be of a quality as defined in subsection (a) at a depth of three (3) inches forming a surface twelve (12) feet in width.
- (f) (Reserved for care of base during construction)
- (g) *Testing.* At least one test location in each block of a street, or at not more than five hundred (500) feet intervals, whichever results in the most tests, for width, depth, density, bearing and cross slope.

D.2.1.7. Roadway shoulder.

- (a) *Material.* The top six (6) inches of the roadway shoulders shall be constructed of material having a minimum bearing value of forty (40) L.B.R. (Limerock Bearing Ratio).
- (b) *Density.* It shall be compacted to a density of not less than ninety-eight (98) percent of the density as determined by AASHO Method T 180.
- (c) *Roadway shoulders.* All roadways, except those constructed with curbs, shall employ roadway shoulders.

D.2.1.8. Pavement.

- (a) *Material.* Asphaltic concrete Type III or Type S-III (minimum thickness = 1 1/4 inches). Other surfaces of equal stability and wearability are acceptable if approved by the county's director of public works.

- (b) *Testing.* At least one (1) test location on material placed in each block of a street, or at not more than five hundred (500) feet intervals, whichever results in the most tests, for width, depth, density and cross slope. Run a minimum of one (1) test for extraction, gradation, Marshall Stability of the asphalt mixture for each day or part of the day's production. A second sample will be required following any change in the production process or materials.
- (c) *Reflectors.* Pavement reflectors for the night time location of fire hydrants shall be installed by the developer on all roads in a non-exempt subdivision. Such markers shall be located opposite the hydrant, in the middle of the lane nearest the hydrant.

D.2.1.9. Curb and gutter.

- (a) *Type.* Standard FDOT curb, FDOT curb and gutter, Miami Curb and gutter, and header curb allowed.
- (b) *Material.* Concrete shall have a minimum compressive strength of three thousand (3,000) psi, unless noted otherwise.
- (c) *Testing.* For concrete compressive strength.

D.2.1.10. Sidewalks.

- (a) *Width/depth.* The sidewalks required by this chapter shall be at least four (4) feet in width and four (4) inches deep and constructed of concrete, except that the commission may permit the installation of walkways constructed of other suitable materials when it concludes that:
 - (1) Such walkways would serve the residents of the development as adequately as concrete sidewalks; and
 - (2) Such walkways would be more environmentally desirable or more in keeping with the overall design of the development.

D.2.1.11. Street identification. Street name markers which meet county specifications shall be installed at all street intersections.

D.2.1.12. Bridges.

- (a) *Specifications.* Materials and methods of construction shall conform to the current Florida Department of Transportation Standard Specifications for Road and Bridge Construction.
- (b) *Materials.* Bridges shall be constructed of pre-cast concrete, pre-stressed concrete, cast-in-place concrete, or composite concrete-steel. Steel, timber, or other materials may be used for bridge construction if the use of such materials is consistent with good

engineering practice and approved by the county engineer.

- (c) *Safety provisions.* Bridges shall be constructed with curbs and in addition, sidewalks may be required if the situation requires them. Approach guard rails or fences shall be provided where required for safety. The need for sidewalks and/or guard rails or fences shall be determined by the commission.

D.2.2. (Reserved for operation and maintenance)

(Ord. No. 96-23, § 9, 12-16-96; Ord. No. 2003-1, 1-14-03; Ord. No. 2003-14, § 2, 8-12-03)

Sec. D.3. Subdivision standards.

D.3.1. Construction.

D.3.1.1. Block standards.

- (a) *Survey markers.*
 - (1) Permanent reference monuments (PRMs) shall be set as required by Chapter 177, Part 1, F.S.
 - (2) Permanent control points (PCPs) shall be set as required by Chapter 177, Part 1, F.S.

D.3.1.2. Lot/parcel standards.

- (a) *Lot corners.* All lot corners in non-exempt subdivisions shall be accurately marked by a surveyor with minimum 1/2-inch I.D. iron pipe or 5/8-inch rods, at least two (2) feet long; or four (4) inch concrete markers at least two (2) feet long.

D.3.2. Operation and maintenance.

D.3.2.1. Private improvements in non-exempt subdivision.

- (a) *Homeowners association.* A homeowners association, or similar legal entity, that, pursuant to other sections of this chapter, is established to be responsible for the maintenance and control of roadways, utilities, drainage, common open space and other facilities shall be established in such a manner that:
 - (1) Provision for the establishment of the association or similar entity is made before any lot in the development is sold or any building occupied.
 - (2) The association or similar legal entity has clear legal authority to maintain and exercise control over such facilities.
 - (3) The association or similar legal entity has the power to compel contributions from

the residents of the development to cover their proportionate shares of the costs associated with the maintenance and operation of such facilities.

- (4) The incorporation document shall institute a system of representative government by the assembly of the owners maintaining prerogatives for the developer greater than that of the owners only during the period of sale. The document shall:

- a. Set standards for construction and maintenance on private lots;
- b. Provide for maintenance on public tracts;

(Ord. No. 96-23, § 9, 12-16-96)

Sec. D.4. On-site traffic circulation and accommodation standards.

D.4.1. (Reserved for construction).

D.4.2. Operation and maintenance.

D.4.2.1. Unsubdivided development. All streets, drives, parking areas and other traffic circulation elements that are required site improvements in unsubdivided residential and non-residential development shall be owned and maintained by the developer or his successor or assigns.

D.4.2.2. Vehicle accommodation area surfaces. All off-street parking areas shall be well maintained as long as the use exists for which the facilities are required. Areas shall be kept free of potholes, debris, weeds, broken curbs and broken wheel stops. Paved areas shall be clearly striped. All lighting shall be kept in working condition.

(Ord. No. 96-23, § 9, 12-16-96)

Sec. D.5. Utilities standards.

D.5.1. Construction.

D.5.1.1. General.

- (a) *As-built drawings.* Whenever a developer installs or causes to be installed any utility line in any existing or proposed public right-of-way, the developer shall, as soon as practical after installation is complete, and before acceptance of any water or sewer lines, furnish the director with "as built plans", certified by an engineer, that show the exact location of such utility lines. Compliance with this requirement shall be a condition of the continued validity of the permit authorizing such development.
- (b) *Utility easements.* These easements shall be restored to pre-construction or better conditions subsequent to the installation of utilities.

D.5.1.2. Water systems.

- (a) *(Reserved for standard requirements)*
- (b) *Fire protection requirements.*
 - (1) Hydrants/fire flows.
 - a. The county engineer, in consultation with the fire chief, shall determine the precise location of all fire hydrants, subject to other provisions of this section.
 - b. The county engineer, in consultation with the fire chief, shall determine the design standards of all hydrants based on fire flow needs. Unless otherwise specified, all fire hydrants shall have two (2) 2- 1/2-inch hose connections and one (1) 4- 1/2--inch hose connection. The 2- 1/2-inch hose connections shall be located at least twenty-one (21) inches from ground level. All hydrants threads shall be national standard threads.
 - c. Water lines that serve fire hydrants shall meet the following requirements:
 - 1. Must be at least six (6) inches in diameter.
 - 2. Must provide not less than one-thousand (1,000) gallons per minute water flow at any single hydrant simultaneous with peak system water demand, with a residual system pressure of not less than twenty (20) psi. More flow may be required when appropriate. The attainment of these levels must be demonstrated by pressure testing or computer modeling.
 - 3. Unless no other practical alternative is available, no such line shall be a dead-end line.
 - d. When required, standpipes shall be fitted with a 2- 1/2-inch National Fire Thread connections and their locations shall be determined during the development review process.

D.5.1.3. (Reserved for sanitary sewer systems).

D.5.2. (Reserved for operation and maintenance).

(Ord. No. 96-23, § 9, 12-16-96)

Sec. D.6. Drainage and storm water management standards.

D.6.1. Construction.

D.6.1.1. Grading and drainage. Where grading and shaping is required for drainage, it shall be done according to the approved plan and the following:

- (a) *Drainage pipe.* Where methods of drainage using pipe are required, the following standards apply:
 - (1) Storm sewer pipe.
 - a. Acceptable types--Reinforced concrete, galvanized corrugated metal or corrugated aluminum.
 - b. Minimum size--Eighteen (18) inches or equal.
 - c.; Inlet or manhole required at each change of alignment or grade.
- (b) *Headwalls.* Shall be constructed of concrete or sand-cement rip rap (5:1 mix approved bags)
- (c) *Inlets.* Meet DOT specs.
- (d) *Manholes.* Meet DOT specs.
- (e) *Erosion control.*
 - (1) *Grassing and mulching.* Required on all disturbed areas where sodding is not required. Also required on lot line swales where the grade does not exceed three (3) percent.
 - (2) *Sodding.* Required on all drainage ditches and lot line swales where the grade exceeds three (3) percent.
 - (3) (Reserved for construction details for drainage swales, curbs and gutters, and storm drains).

D.6.2. Operation and maintenance.

D.6.2.1. For unsubdivided development. All ownership and maintenance responsibility of drainage and storm water management facilities shall remain private. Failure to properly maintain such facilities as approved shall constitute a violation of this chapter.

D.6.2.2. For subdivided development.

- (a) *Private responsibility.* All ownership and maintenance responsibility of drainage and storm water management facilities outside of state or county maintained road right-of-ways shall remain private, unless such responsibility is specifically accepted by the state or commission respectively.
 - (1) All privately maintained drainage and storm water management facilities,

excepting conveyance swales, and the land upon which such elements lay, shall be dedicated to the public and become the responsibility of a homeowners association, or similar legal entity, established pursuant to section 13-553.

- (2) Parcels so dedicated shall be designated for such use and of regular and sufficient size to provide for mechanized maintenance (equipment operations) of same. Such areas shall not be part of lots or parcels planned for development, but shall be identified on the development plat as tracts dedicated to the public for drainage purposes.
- (3) Failure to properly maintain such facilities as approved shall constitute a violation of this chapter

(b) *(Reserved for county/state responsibility).*

D.6.2.3. Waterways. The developer will be required to make adequate provision for the private maintenance of waterways. Such provision shall include the designation of a entity who shall be financially responsible for such maintenance. If required, agreements to provide private maintenance of water ways shall be submitted with other applicable application materials.

(Ord. No. 96-23, § 9, 12-16-96)

Sec. D.7. Floodplain and floodway overlay zones standards.

D.7.1. Construction.

D.7.1.1. Certification of floor elevation or flood proofing elevation. Upon placement of the lowest floor, or flood-proofing by whatever construction means, and before further construction above the base flood elevation occurs, it shall be the duty of the permit holder to submit to the Building Official a certification, on approved FEMA certification form, of the elevation of the lowest floor or the flood-proofed elevation, whichever is applicable, as constructed, in relation to mean sea level. Said floor elevation certification shall be prepared by or under the direct supervision of a surveyor or engineer and certified by same. When flood-proofing is utilized for a particular building, said flood proofing certification shall be prepared by or under the direct supervision of an engineer or architect and certified by same. Any work undertaken prior to submission of the certification shall be at the permit holder's risk. The building official shall review the certification submitted and deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further progressive work being permitted to proceed. Failure to submit the survey or failure to make said corrections required hereby, shall be cause to issue a stop-work order for the project.

D.7.2. (Reserved for operation and maintenance).

(Ord. No. 96-23, § 9, 12-16-96)

Sec. D.8. Setback and buffer standards.

D.8.1. Construction.

D.8.1.1. Screening materials/installation.

- (a) *General.* Screening may be composed of walls, landscaped earth berms, planted vegetation, existing vegetation, or a combination thereof, except that walls for Type A screening shall be of masonry construction at least eight (8) inches thick.
- (b) *Vegetation screens.*
 - (1) Compliance of planted vegetative screens or natural vegetation will be judged on the basis of the average mature height and density of foliage of the subject species, or field observation of existing vegetation. The opaqueness requirements specified herein must be met in all seasons of the year
 - (2) Preservation and protection of existing native species of plant materials is strongly encouraged. Where opacity requirements result in the need for additional trees or shrubs in an existing natural area, there shall be a minimum disturbance to native species.
 - (3) Xeriscape principals utilizing drought resistant plants and horticulture methods are encouraged wherever a vegetative screen is constructed.
 - (4) Vegetative screening should be used to minimize potential erosion through the use of plant materials which aid in soil stabilization.
 - (5) All vegetation required to be planted shall meet the following standards:
 - 1. All plants should be Florida Grade No. 1 or better in accordance with Grades and Standards for Nursery Plants (GSNP), published by the State of Florida, Department of Agriculture and Consumer Services. Nursery stock shall meet the minimum requirements of the American Standards For Nursery Stock (ASNS), published by the American Association of Nurserymen, Inc.
 - 2. Plants shall be sound, healthy, vigorous, free from mutilation, plant diseases, insect pests or their eggs, and fungus and have healthy, normal root systems. Plants shall be nursery grown stock in containers or freshly dug, balled and burlapped.
 - 3. Shrubs and other vegetation, when planted, shall be of a height and spacing sufficient to meet the opacity requirements of this section. Compliance of planted vegetative screens or natural vegetation will be judged on the basis of the average mature height and density of foliage of the subject species, or field observation of existing vegetation.

- (6) Installation of all vegetative screens shall conform to standard acceptable horticultural practice, including watering and fertilizing until firmly established and meeting the height and opacity requirements of this section.
 - (7) Slopes of berms used in conjunction with vegetative screening shall not exceed 3:1 and shall be completely covered with ground cover or vegetation.
- (c) *Manmade screens:*
- (1) Masonry walls shall be constructed to equal or exceed the building code requirements for structures.
 - (2) Wooden or metal fences shall be of durable materials and substantial construction.

D.8.2. Maintenance. Maintenance of all required screening shall be the responsibility of the property owner. Failure to maintain plantings and other features of required screening in an attractive and healthy state with the required height and opacity shall be considered a violation of this chapter.
(Ord. No. 96-23, § 9, 12-16-96)

Sec. D.9. Recreation and open space standards.

D.9.1. (Reserved for construction)

D.9.2. Operation and maintenance.

D.9.2.1. The person or entity having the ownership or control over the open space shall be responsible for its continuing upkeep and proper maintenance. Such person or entity shall have a program for the provision, maintenance, and operation of all such areas, improvements and facilities for the common use of the PUD occupants which will not be provided, operated or maintained at general public expense.

(Ord. No. 96-23, § 9, 12-16-96)

Sec. D.10. Resource protection standards.

D.10.1. (Reserved for construction).

D.10.2. (Reserved for operation and maintenance).

Sec. D.11. Safety and nuisance standards.

D.11.1. (Reserved for construction).

D.11.2. (Reserved for operation and maintenance).

(Ord. No. 96-23, § 9, 12-16-96)